

BLESHINSKIY, S.V.; USUBAKUNOV, M.

Determination of halide and thiocyanate ions by the use of  
mercarbides. Izv.AN Kir.SSR.Ser.est.i tekhn.nauk 4 no.9:47-51  
'62. (MIRA 16:4)

(Halides) (Thiocyanates) (Ion exchange)

20

88861  
S/044/60/000/007/015/058  
C111/C222

16.3 Yoo

AUTHOR: Usubakunov, R.

TITLE: On a method for the estimation of the neighborliness of solutions of some differential equations

PERIODICAL: Referativnyy zhurnal. Matematika, no.7, 1960, 83.  
Abstract no.7563. In sb. Materialy 8-y Nauchn.konferentsii professorsko-prepodavat. sostava Fiz.-matem.fak. (Kirg. un-t). Frunze, 1959, 43-46

TEXT: The solution of the Cauchy problem for the differential equation  $R(y) = f(x)$ ,  $R(y) \equiv y^{(n)} + a_1(x)y^{(n-1)} + \dots + a_n(x)y$  is replaced by the solution of the Cauchy problem for the equation  $Q(z) = z^{(n)} + b_1(x)z^{(n-1)} + \dots + b_n(x)z = f(x)$ , where  $|b_i(x) - a_i(x)| < \varepsilon$ ,  $x \in [a, b]$ ,  $i=1, 2, \dots, n$ . An estimation of the difference  $y-z$  and its derivatives is given.

[Abstracter's note: The above text is a full translation of the original Soviet abstract.]

Card 1/1

GRIGORYAN, Kh.A.; GORELIK, M.A.; ALIYEV, Z.E.; PINSKER, B.A.; USYNINA, T.P.

Producing furnace black from gas rich in air by enriching the  
gasoline liquid hydrocarbons. Sbor.trud. AziNII MP no.2:362-372  
Ag '58. (MIRA 12:6)

(Carbon black)

*Mech.-Elec. engineer D*

P.T.A

687

621.327.3/4

Malynowicz, R. The Application in Lighting Technique of Reflectors  
Made by Evaporating Metals in a Vacuum.

„Zastosowanie w technice świetlnej odbłyśków wykonanych przez  
odparowanie metali w próżni”. Przegląd Elektrotechniczny No  
9—10—11, 1950, pp. 489—490, 1 fig., 4 tabs.

The article contains an assessment of savings in electric energy  
likely to accrue from replacing lamps fitted with separate reflectors  
by lamps with an inner reflecting coating. The author deals with the  
methods of applying the coating, the selection of metals for the  
coating and the shape of the bulb.

"APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001858220015-9

USTYKOWICZ, R.

"A Conversation About Fluorescent Defectology." p. 309 (HORIĘDZTY TECHNIKI, Vol. 6,  
No. 7, July 1953) Warszawa

SO: Monthly List of East European Accessions, Library of Congress, Vol. 2, No. 10,  
October 1953. Unclassified.

APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001858220015-9"

USTYNOWICZ, R.; SEKOWSKI, S.

"New Problems of Radiant Drying." p.235  
"For More Collaboration of Technical Periodicals with Production Establishments." p.239  
"Meeting of the Laureates of State Prizes with the Capital's Technical Workers." p.241  
"Fulfillment of the Plan of Educational Lectures in 1952." p.241  
"Yearly Meetings of the Provincial Branches of the Chief Technical Organization." p.243  
"Nowa Huta, the Paramount Task of our Building Industry." p.250  
"We Produce New Types of Machines." p.250  
(PRZEGLAD TECHNICZNY Vol. 74, no. 6, June 1953 Warszawa, Poland)

SO: Monthly List of East European Accessions, LC, Vol. 3, no. 5, May 1954/Uncl.

USTINYUK A.

USSR /Chemical Technology. Chemical Products  
and Their Application

T-32

Food industry

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 33020

Author : Ustynyuk A.

Title : The Dairy Industry of the Polish People's  
Republic

Orig Pub: Moloch. prom-st', 1956, No 8, 40-42

Abstract: A review article.

Card 1/1

PEREVALOVA, E.G.; USTYNYUK, Yu.A.; USTYNYUK, L.A.; NESMEYANOV, A.N.

Reactivity of compounds containing a ferrocenylmethyl group.  
Report No.6: Steric effects in reactions of alkylation by  
quaternary ammonium salts. Izv. AN SSSR. Ser. khim. no.11:  
1977-1985 N '63. (MIRA 17:1)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

5(3)

SOV/79-29-6-41/72

AUTHORS: Levina, R. Ya., Kostin, V. N., Kin Dyay Gir, Ustynyuk, T. K.

TITLE: Reaction of Cyclopropane Hydrocarbons With Mercuric Salts  
(Vzaimodeystviye tsiklopropanovykh uglevodorodov s solyami  
okisi rtuti). X. Action of Mercury Acetate on (0,1,3)-Bicyclo-  
hexanes (X. Deystviye atsetata rtuti na (0,1,3)-bitsiklogeksany)

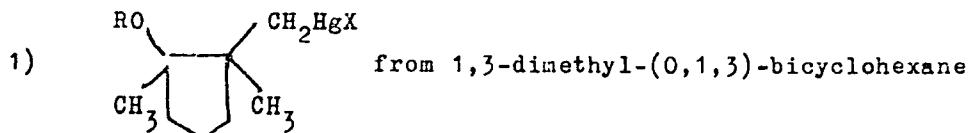
PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 6,  
pp 1956 - 1960 (USSR)

ABSTRACT: The products of the reactions described earlier (Refs 1-4) which  
are characteristic of the above hydrocarbons and which take  
place under the opening of the three-membered cycle i.e. the  
T-alcohols and their ethers were the products of the reaction  
with mercury acetate in aqueous and alcoholic solutions. Their  
investigation revealed the cleavage of the three-membered cycle  
between the hydrocarbon atoms which were the most strongly and  
the most weakly substituted (Scheme 1). The forming crystalline  
organomercury compounds may be successfully for the identifica-  
tion of the cyclopropane hydrocarbons. In the present paper  
it was found that the above reaction is also characteristic  
of the "bridge bicyclo hydrocarbons" in the system of which

Card 1/3

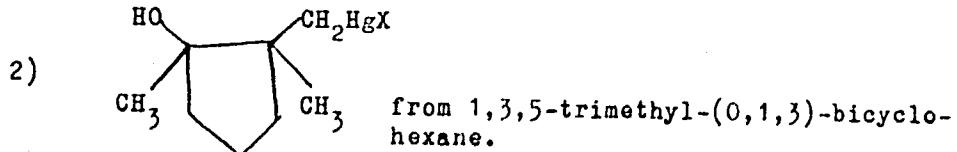
Reaction of Cyclopropane Hydrocarbons With Mercuric Salts. X. Action of Mercury Acetate on (0,1,3)-Bicyclohexanes SOV/79-29-6-41/72

the three-membered cycle is integrated. It was shown (Scheme 2) that the opening of the three-membered cycle in the homologues of (0,1,3)-bicyclohexane in the action of mercury acetate on these homologues in aqueous or methanol solution does not take place at the bridge C-C-bond. The products of this reaction are cyclopentanoles  $\gamma$ -mercurized in the side chain or their methyl ethers. The synthesis of the crystalline  $\gamma$ -mercurized alcohols and their ethers may thus serve for the determination of 1,3-dimethyl-1,3,5-trimethyl and 1-methyl-3-ethyl-(0,1,3)-bicyclohexane. The structure of the  $\gamma$ -mercurized alcohols and their ethers is the following:



Card 2/3

Reaction of Cyclopropane Hydrocarbons With Mercuric Salts. X. Action of Mercury Acetate on (0,1,3)-Bicyclohexanes SOV/79-29-6-41/72



There are 3 tables and 7 Soviet references.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: May 25, 1958

Card 3/3

AKHREM, A.A.; USTYNYUK, T.K.

Rearrangement of 21,21-dibromo- $\Delta^4$ -pregnen-17 $\beta$ -ol-3, 20-dione acetate to isomeric  $\Delta^4$ -pregnene-17 $\beta$ , 20 $\beta$ -diol-21-oic acids. Izv. AN SSSR. Otd. khim. nauk no.4:768 Ap '63. (MIRA 16:3)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.  
(Pregnenedione) (Pregnenoic acid)

AKHREM, Afanasiy Alekseyevich; USTINYUK, T. K.

"Rearrangement of 17-acetate-20,21-dibromo- $\Delta^4$ -pregnene-17 $\beta$ -ol-3,  
20-dione into isomeric  $\Delta^4$ -pregnene-17 $\beta$ ,20 $\beta$ -diol-2 $\alpha$ oic acids."

Report presented for the 3rd Intl. Symposium on the Chemistry of  
Natural Products (IUPAC), Kyoto, Japan, 12-18 April 1964.

5(3)

AUTHORS: Nesmeyanov, A. N., Perevalova, E. G., Shilovtseva, L. S., Ustyynyuk, Yu. A. SOV/20-124-2-25/71

TITLE: Synthesis of Ferrocene Derivatives by Means of the N,N-Dimethyl-Aminomethyl Ferrocene Methiodide (Sintez proizvodnykh ferrotsena s pomoshch'yu yodmetilata N,N-dimetilaminometilferrotsena)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 2, pp 331-334 (USSR)

ABSTRACT: The compound last mentioned in the title was earlier used by the authors (Ref 5) for the synthesis of methyl ferrocene. It proved to be a suitable reagent for the introduction of the ferrocenyl-methyl group (Refs 2-8). In the present paper some substitution reactions of the dimethyl-amino group were carried out, furthermore ~~methyl-ferrocene~~ was aminomethylated and ferrocene aminoethylated. It was thus possible to obtain the sodium salt of ferrocenyl-methane sulfonic acid by the interaction between the compound mentioned in the title and sodium sulfite. By the influence of potassium thiocyanate ferrocenyl-methyl thiocyanate was formed. Sodium phenolate and  $\beta$ -naphtholate yielded the phenyl- and  $\beta$  naphthyl ether of the ferrocene carbinol.

Card 1/3

Synthesis of Ferrocene Derivatives  
by Means of the N,N-Dimethyl-Aminomethyl Ferrocene Methiodide -

SOV/20-124-2-25/71

By ferrocenyl methylation of the p-oxy-azo benzene an azo compound was formed containing a ferrocenyl group. This had hitherto not been possible. On the aminomethylation of the methyl ferrocene (Ref 5) with a mixture of N,N,N<sup>1</sup>,N<sup>1</sup>-tetramethyl-diamino methane and paraform a homoannular (N,N, dimethyl-amino methyl) methyl ferrocene was obtained in a 60% yield. The aminomethylation of the methyl ferrocene was carried out in the substituted cyclopentadiene ring in a yield which was somewhat higher than for ferrocene (51%, Ref 2). The addition of phosphoric acid increased the yield up to 80%. Besides, diaminomethylated methyl ferrocene is formed (10% yield). Thus the methyl group in the methyl ferrocene considerably activates the ferrocene nucleus against electrophilic attacks. The formation of the homoannular compound suggests that the ring to which the methyl group is bound, is activated to a more considerable degree. The successful production of the diaminomethylated methyl ferrocene further proves that the influence exerted by the substituents is transferred from one cyclopentadienyl ring to the other one by means of the iron atom (Ref 9). From the compound mentioned in the title the authors

Card 2/3

Synthesis of Ferrocene Derivatives  
by Means of the N,N-Dimethyl-Aminomethyl Ferrocene Methiodide

SOV/20-124-2-25/71

synthesized the homoannular dimethyl ferrocene. It may be assumed from the comparison of infrared spectra that the alkyl groups are in a 1,3-position. There are 12 references, 2 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova  
(Moscow State University imeni M. V. Lomonosov)

SUBMITTED: October 14, 1958

Card 3/3

83136

S/020/60/133/005/014/019  
B016/B060

1312  
5.3700(B)

AUTHORS: Nesmeyanov, A. N., Academician, Perevalova, E. G.,  
Ustvnyuk, Yu. A.

TITLE: Ferrocenyl Methyl Lithium 1

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 133, No. 5,  
pp. 1105-1107

TEXT: The authors previously described the production of ethers of ferrocenyl carbinol (Ref. 1). In the present study they used lithium to cleave ferrocenyl carbinol methyl ether dissolved in tetrahydrofuran. The resulting ferrocenyl methyl lithium was used to produce ferrocene derivatives. The authors proved furthermore that ferrocenyl carbinol ethers can be readily obtained by heating ferrocenyl carbinol with the respective alcohols in the presence of acetic acid. In this way, the authors obtained methyl-, ethyl-, and benzyl ethers of ferrocenyl carbinol in yields of 73, 80, and 72%. The ready formation of these ethers is explained by the stability of the ferrocenyl methyl

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Card 1/2

83136

Ferrocenyl Methyl Lithium

S/020/60/133/005/014/019  
B016/B060

carbonium ion (Ref. 2). The reaction conditions for the production of ferrocenyl methyl lithium are analogous to those indicated by H. Gilman et al. (Ref. 3) for the cleavage of benzyl ethers. Ferrocenyl methyl lithium smoothly reacts with trimethyl chlorosilane to give (ferrocenylmethyl)-trimethyl silane in a 68% yield. Under the action of anhydrous ferric chloride, ferrocenyl methyl lithium yields 1,2-diferrocenyl ethane. New data regarding diferorocenyl ethanes produced by condensation of formaldehyde and benzaldehyde with ferrocene (Ref. 5), as well as by Friedel-Krafts's reaction (Ref. 8), will be published at the same time. There are 8 references: 4 Soviet and 4 US.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

SUBMITTED: April 18, 1960

Card 2/2

L 12852-63  
ACCESSION NR: AP3002287 EWT(j)/EPF(c)/EWT(m)/EDS P-4/Pc-4 RM/NW  
S/0062/63/000/005/1036/1045

AUTHOR: Perevalova, E. G.; Usty\*nyuk, Yu. A.; Nesmeyanov, A. N.

TITLE: The reactivity of compounds containing the ferrocenylmethyl group. Report  
1. Hydrolytic cracking of tetravalent ammonium salts

SOURCE: AN SSSR. Izv. Otdeleniya khimicheskikh nauk, no. 6, 1963, 1036-1045

TOPIC TAGS: tetravalent ammonium salts, ferrocenylmethyl group, hydrolytic cracking, rate of hydrolysis

ABSTRACT: A series of tetravalent ammonium salts containing the ferrocenylmethyl group was synthesized, i.e. compounds of the type shown in the enclosure, where RCH<sub>2</sub> is methyl, ethyl, n-propyl, n-butyl, n-nonyl, benzyl, allyl, carboxymethyl, phenacyl or ferrocenyl methyl, and the anion X is chloro, bromo, iodo or picryl. Hydrolytic cracking of these compounds in alkaline, neutral and 50% aqueous dioxane solutions was studied: rate of hydrolysis was independent of anions and of solvent concentration, but increased with electron acceptor properties of the CH<sub>2</sub>R group. Hydrolysis proceeded according to the S<sub>N</sub>1 mechanism with the intermediate formation of the ferrocenylmethyl cation. Orig. art. has: 9 tables, 8 formulas, and 1 figure.

Card 1/21

Moscow St. Un.

L 12228-63  
ACCESSION NR: AP3002288

ECP(j)/ECP(c)/ECP(q)/ENT(m)/BRS AFETIC/LSD Sc-4/Pr-4 RM/RN/JD/WB  
S/0062/63/000/006/1045/1049

69  
68

AUTHOR: Perevalova, E. G.; Usty\*nyuk, Yu. A.; Nesmeyanov, A. N.

TITLE: Reactivity of compounds containing a ferrocenylmethyl group. Report 2.  
Regeneration of tetravalent ammonium salts, containing ferrocenylmethyl radical,  
with sodium amalgam by Emde

SOURCE: AN SSSR. Izv. Otdeleniye khimicheskikh nauk, no. 6, 1963, 1045-1049

TOPIC TAGS: ferrocenylmethyl group, trimethyl ferrocenylmethyl ammonium iodide,  
dimethylallyl ferrocenylmethyl ammonium iodide, dimethylbenzyl ferrocenylmethyl  
ammonium iodide, sodium amalgam

ABSTRACT: The reduction of trimethyl-, dimethylallyl-, and dimethylbenzyl ferro-  
cenylmethyl ammonium iodide with sodium amalgam by the method of Emde and co-  
workers (Arch. Pharm. v. 247, 1909, 333, 314, 351; v. 249, 1911, 111, 118, 166;  
Liebigs Ann. Chem. 391, 1912, 88) was investigated. The ferrocenylmethyl group  
split off from the N of the tetravalent ammonium much more readily than the methyl,  
much less readily than the benzyl, and at about the same rate as the allyl group.  
Hence, ferrocene group stabilizes the neighboring radical center less than the  
benzyl, and more than the methyl radical, and about equally to the double bond of

Card 1/21

PEREVALOVA, E.G.; USTYNYUK, Yu.A.

Reactivity of compounds containing a ferrocenylmethyl group.  
Report No.3: Reactions of quaternary ammonium salts with  
organomagnesium compounds in the presence of cobaltous chloride.  
Izv. AN SSSR Ser.khim. no.10:1776-1782 O '63. (MIRA 17:3)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

PEREVALOVA, E.G.; USTYNYUK, Yu.A.; NESMEYANOV, A.N.

Reactivity of compounds containing a ferrocenylmethyl group.  
Report No.4: Reaction of ferrocenylmethyllithium. Izv. AN  
SSSR. Ser. khim. no.11:1967-1972 N '63.

Reactivity of compounds containing a ferrocenylmethyl group.  
Report No.5: Preparation of organolithium compounds with  
 $\alpha$ -ferrocenyl alkyl groups. Ibid.:1972-1977 (MIRA 17:1)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

PEREVALOVA, E.G.; USTINYUK, Yu.A.; USTINYUK, L.A.; NESMEYANOV, A.N.

Reactivity of compounds containing a ferrocenylmethyl group.  
Report No.6: Steric effects in reactions of alkylation by  
quaternary ammonium salts. Izv. AN SSSR. Ser. khim. no.11:  
1977-1985 N '63. (MIRA 17:1)

1. Moskovskiy gosudarstvenny universitet imeni Lomonosova.

ACCESSION NR: AP4010040

S/0062/64/000/001/0062/0069

AUTHORS: Usty#nyuk, Yu. A.; Perevalova, E. G.

TITLE: Reactivity of compounds containing the ferrocenylmethyl group. 7. Rearrangement of the dimethylbenzyl(ferrocenylmethyl)ammonium chloride under the action of nucleophilic reagents

SOURCE: AN SSSR. Izvestiya. Ser. khim., no. 1, 1964, 62-69

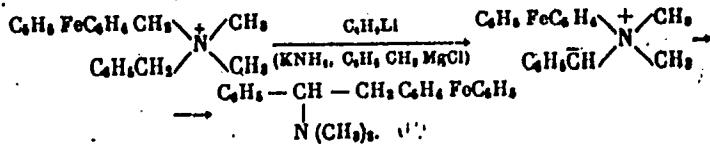
TOPIC TAGS: ferrocenylmethyl compounds, reactivity, rearrangement, ferrocenylmethyl group, stabilizing action, isomerization, intramolecular reduction, carbanion stabilization, nucleophilic reagents dibutyllithium

ABSTRACT: The comparative stabilizing action of the benzyl and the ferrocenyl rings on an adjacent carbanion center was determined from the rearrangement products. Dimethylbenzyl(ferrocenylmethyl)ammonium chloride (I) rearranges in the presence of dibutyllithium to (alpha-phenyl-beta-ferrocenylethyl)-dimethylamine (II), 72% yield. In the presence of potassium amide, conversion is 50%, with benzyl-

Card 1/3

ACCESSION NR: AP4010040

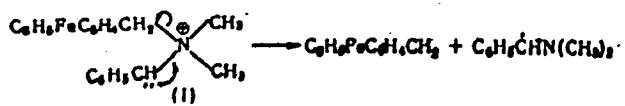
magnesium chloride, 21%.



Thus the benzene ring stabilizes the adjacent anion center more than the ferrocenyl ring does. A new type of isomerization was observed in the reaction with dibutyllithium; N,N,N', N'-tetramethyl-alpha,beta-diphenylethylene diamine and 1,2-diferrocenylethane were produced in addition to II, the amount of II decreasing on prolonging the reaction. The following intramolecular reduction of the ammonium nitrogen is suggested:

Card 2/3

ACOESION NR: AP4010040



"Authors express deep appreciation to A. N. Nesmeyanov for attention  
to the work and valuable advice."  
Orig. art. has: 10 Equations.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii  
nauk SSSR Moskovskiy gosudarstvennyy universitet im.  
M. V. Lomonosova (Institute of Organometallic Compounds,  
Academy of Sciences SSSR Moscow State University)

SUBMITTED: 06Sep62

DATE ACQ: 14Feb64

ENCL: 00

SUB CODE: CH

NR REF Sov: 006

OTHER: 005

Card 3/3

ACCESSION NR: AP4010041

S/0062/64/000/001/0070/0073

AUTHORS: Usty<sup>n</sup>yuk, Yu.A.; Perevalova, E.G.; Nesmeyanov, A.N.

TICLE: The reactive ability of compounds containing the ferrocenyl-methyl group Report No.8. Wittig rearrangement in a series of ferrocenylcarbinol ethers

SOURCE: AN SSSR. Izvestiya. Ser. khim., no.1, 1964, 70-73

TOPIC TAGS: ferrocenylmethyl group, Wittig rearrangement, ferrocenyl-carbinol ethers, butyl lithium, lithium ether linkage, ether isomerization, anionic center stabilization, 1 phenyl 2 ferrocenylethanol, 2 phenyl 1 ferrocenylethanol, 1,2 diferrocenylethanol, 1,2 diferrocenyl-ethylene

ABSTRACT: In continuation of earlier work, this rearrangement was studied for the benzylferrocenylmethyl and bisferrocenylmethyl ethers under the influence of butyllithium and tetrahydrofuran. During reaction with the first compound a 55% yield of 1-phenyl-2-ferrocenyl-ethanol-1 was obtained without formation of its 2-phenyl-1-ferrocenyl-

Card 1/2

ACCESSION NR: AP4010041

ethanol isomer, while reaction of the second yielded 1,2-diferrocenyl-ethanol. The latter rearrangement proceeded with less ease, with a yield of only 23% and a 27% residue of unchanged starter ether. The product of the second rearrangement was converted into 1,2-diferrocenylethylene by dehydration; this latter is a red crystalline substance, m.p. 264-265, soluble in hot benzene, toluene and chloroform. The new data confirmed earlier findings, i.e., that the ferrocenyl nucleus will stabilize the adjoining carbonation center to a lesser degree than the benzene ring. The laboratory procedure, the products obtained, and their description and IR spectra are reported. "The authors wish to thank O.T. Nikitina for determining the molecular weight." Orig. art. has: 4 formulas.

ASSOCIATION: Institut elementoorganicheskikh soedineniy Akademii nauk SSSR (Institute of Organoelemental Compounds, Academy of Sciences SSSR); Moskovskiy gosudarstvennyi universitet im. M.V. Lomonosova (Moscow State University)

SUBMITTED: 10Sep62 DATE ACQ: 14Feb64 ENOL: 00

SUB CODE: CH NR REF Sov: 004 OTHER: 004

Card 2/2

NESMEYANOV, A.N.; PEREVALOVA, E.G.; LEONT'YEVA, L.I.; USTYNYUK, Yu.A.

Ferrocenylmethylthiol and methyl(ferrocenylmethyl) sulfide.  
Izv. AN SSSR. Ser. khim. no.9:1696-1697 '65. (MIRA 18:9)

1. Moskovskiy gosudarstvenny universitet.

NESMEYANOV, A.N.; PEREVALOVA, E.G.; LEONT'YEVA, L.I.; USTYNYUK, Yu.A.

Synthesis of 1,2-disubstituted ferrocenes. Izv. AN SSSR. Ser. Khim.  
no.10:1882-1884 '65. (MERA 18:10)

1. Moskovskiy gosudarstvennyy universitet.

L 27456-66	EWI(m)/EWP(j)	RM
ACC NR: AP5027691	SOURCE CODE:	UR/0062/65/000/010/1882/1884
AUTHOR: <u>Nesmeyanov, A. N.</u> ; <u>Perevalova, E. G.</u> ; <u>Leont'yeva, L. I.</u> ; <u>Ustynyuk, Yu. A.</u>		
ORG: <u>Moscow State University im. M. V. Lomonosova (Moskovskiy gosudarstvennyy universitet)</u>		
TITLE: <u>Synthesis of 1,2-disubstituted ferrocenes</u>		
SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 10, 1965, 1882-1884		
TOPIC TAGS: ferrocene, chemical reaction, desulfurization, chemical reduction		
ABSTRACT: The reduction of 1,2-(2'-thia-4'-ketotetramethylene)ferrocene (I) was investigated in order to find suitable methods for the synthesis of homoannular disubstituted ferrocenes. I was desulfurized with Raney nickel to form 1,2-methylethyl- and 1,2-methylacetylferrocene. Reduction of I with lithium aluminum hydride gave 1,2-(2'-thia-4'-hydroxytetramethylene)ferrocene (II). Reduction of I in the presence of aluminum chloride gave 1,2-(2'-thiatetramethylene)-ferrocene, a small amount of II, and methylferrocene, and in one instance, 1,2-(2'-thia-3',4'-dehydrotetramethylene)ferrocene. Orig. art. has: 2 equations.		
Card 1/2	UDC:	542.91+547.35+546.72

L 27456-66

ACC NR: AP5027691

SUB CODE: OC/ SUEM DATE: 03Feb65/ ORIG REF: 002/ OTH REF: 002

Card 2/2

L 26554-66 EWP(j)/EWT(m)/T IJP(c) RM

ACC NR: AP6017364

SOURCE CODE: UR/0062/66/000/003/0558/0559

AUTHOR: Nesmeyanov, A. N.; Perevalova, E. G.; Leont'yeva, L. I.; Ustyynyuk, Yu. A.

ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet) 24  
B

TITLE: Reactions of triferrocenylchloromethane hydrochloride 1

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 3, 1966, 558-559

TOPIC TAGS: organoiron compound, chlorinated organic compound, organomagnesium compound, organosodium compound, organolithium compound, chemical reaction

ABSTRACT: Triferrocenylchloromethane hydrochloride reacts with nucleophilic reagents (organomagnesium and organosodium compounds, lithium aluminohydride, sodium methylate and sodium cyanide) to form the corresponding derivatives of triferrrocenylmethane. [JPRS]

SUB CODE: 07 / SUBM DATE: 22Jul65 / ORIG REF: 002 / OTH REF: 001

Card 1/1

UV

UDC: 542.91+541.49+546.72

Z

L 26555-66 EWP(j)/EWI(m)/T IJP(4) RM

ACC NR: AP6017363

SOURCE CODE: UR/0062/66/000/003/0556/0558

AUTHOR: Nesmeyancv, A. N.; Perevalova, E. G.; Leont'yeva, L. I.; Ustynuk, Yu. A.

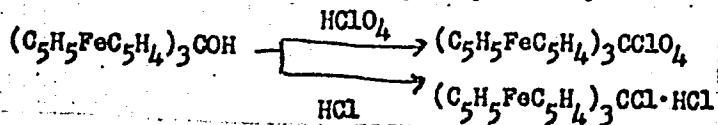
ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet)

TITLE: Triferrocyenylchloromethane hydrochloride

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 3, 1966, 556-558

TOPIC TAGS: organic synthetic process, perchloric acid, perchlorate, hydrogen chloride, organoiron compound

ABSTRACT: The ionic triferrocyenylmethylperchlorate and triferrocyenylchloromethane hydrochloride were synthesized by reaction of triferrocyenylcarbinol with perchloric acid in benzene and anhydrous HCl in ether, respectively.



In polar solutions triferrocyenylchloromethane hydrochloride decomposes to form ferrocenylfulvene. [JPRS]

SUB CODE: 07 / SUBM DATE: 22Jul65 / ORIG REF: 003 / OTH REF: 002

Card 1/1

Z  
UDC: 542.91+541.49+546.72

ACC NR: AP7011356

SOURCE CODE: UR/0062/66/000/010/1870/1871

AUTHOR: Nesmeyannov, A. N.; Chapovskiy, Yu. A.; Ustyynyuk, Yu. A.

ORG: Instituto of Hetero-Organic Compounds, Academy of Sciences USSR  
(Institut elementoorganicheskikh soyedineniy AN SSSR)

TITLE: Splitting of the Fe-C bond in the exchange reaction of the carbonyl ligand of  $C_5H_5Fe(CO)[P(OC_6H_5)_3]C_6H_5$  for triphenylphosphite

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 10, 1966,  
1870-1871

TOPIC TAGS: exchange reaction, carbon compound, nuclear magnetic resonance, mass spectroscopy, IR spectroscopy

SUB CODE:

ABSTRACT: The authors used nuclear magnetic resonance, infrared and mass spectroscopy for studying the product of interaction between  $C_5H_5Fe(CO)[P(OC_6H_5)_3]C_6H_5$  and triphenylphosphite under ultraviolet radiation. The results show a single cyclopentadienyl and two triphenylphosphite ligands per iron atom with no carbonyl ligands. This, together with the diamagnetism of the resultant compound indicate the dimer structure  $\{C_5H_5Fe[P(OC_6H_5)_3]_2\}_2$ . However, data of x-ray analysis are needed for a final conclusion.

Card 1/1

[JPRS: 40,351]

UDC: 541.57+542.957+547.2+547.241  
0931 1737

Preparing leather from the mucous stomach membrane of cattle. V. Ustyubenko. *Koghevenno-Oboronya Prom.* S. S. R. 12, 291 (1933). (1) The material was soaked, slightly fleshed, limed for 2 days, with about 12% Ca(OH)<sub>2</sub> on the weight of the tissue, washed and delimed with bisulfite. Tanning by vegetable or by one-vat or two-vat chrome methods was followed by the usual dyeing, fat-liquoring, drying and finishing. (2) The membrane was soaked for 2 hrs. in cold water, then for 15-20 min. each in three vats with a gradually increasing temp. from 22° to 25° and 30°. After a short drying period the tissue was immersed for 5 min. in a soln. of KMnO<sub>4</sub> (3 g. KMnO<sub>4</sub> in one l. of H<sub>2</sub>O), and then treated with a soln. of 10 g. bisulfite and 7 g. HCl per 1 H<sub>2</sub>O. The tissue was washed, impregnated with an emulsion of chrome and curd soap, washed and tanned. The first tanning vat was made up of K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub> 5, alum 4, HCl 2.5 and H<sub>2</sub>O 200%; the second of 18% thiosulfate, 6% HCl and 200% H<sub>2</sub>O. The tanning was followed by a resting period, neutralization, drying, light fat-liquoring, drying and finishing. Both methods were satisfactory. A. A. Blachtingk

Controlling operations and the quality of leather goods. E. Ovechkin. *Koghevenno-Oboronya Prom.* 19, 543 7 (1934).—A detailed description of checking operations carried out by various labs. in the leather industry, as adopted by the Ukrainian Leather "Trust," is given.

A. A. Blachtingk

BRICHKIN, A.V., USTYUGIN, Ye.I.

Testing a toothed bore bit in perforator boring. Izv.AN Kazakh.  
SSR.Ser.gor.dela, met. i stroimat. no.11:36-41 '56. (MIRA 10:1)  
(Boring machinery--Testing)

USTYUGIN, Ya.I.; FORTYNATOV, V.I., redaktor; YERZDOKOVA, M.L., redaktor  
Izdatel'stva; BERLOV, A.P., tekhnicheskiy redaktor.

[Experience of M.Khakimov's brigade in high-speed mining]  
Opyt raboty brigady M.Khakimova po skorostnoi prokhodke gornykh  
vyrabotok. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi  
i tsvetnoi metallurgii, 1957. 43 p. (MLRA 10:6)  
(Mining engineering)

S/081/62/000/002/034/107  
B151/B108

AUTHORS: Gordiyevskiy, A. V., Ustyugov, G. I.

TITLE: Photometric determination of boron in magnesium alloys

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 2, 1962, 151, abstract:  
2D94 (Izv. vyssh. uchebn. zavedeniy. Khimiya i khim.  
tekhnol., v. 4, no. 3, 1961, 366-369)

TEXT: A photometric and fluorometric method has been developed for the determination of small quantities of B using the dye anthraquinone blue CBr SVG (I). Solutions of (I) in concentrated  $H_2SO_4$  have a cherry red colour which changes to violet in the presence of B. The full development of the colour takes 20 min and the sensitivity of recording is 0.01  $\mu g/ml$  of B. The weak fluorescence of a solution of (I) in concentrated  $H_2SO_4$  when irradiated with UV light becomes an intensely bright red in the presence of B. The sensitivity is 0.001  $\mu g/ml$  of B. With both methods the optimum  $H_2SO_4$  concentration is 85 %. The fluorometric method is used for determining B in Mg5 (Mg5) alloy (Mg-Al-Zn). 0.1 g of the sample is

Card 1/2

Photometric determination of boron in...

S/08:/62/000/002/054/-07  
B151/B108

introduced into a quartz flask containing 10 ml water. This is connected to a reflux condenser and then concentrated  $H_2SO_4$  is added slowly. Until the sample is dissolved 30 %  $H_2O_2$  solution is added to decompose the carbides. The solution is boiled (to decompose the  $H_2O_2$ ) and enough concentrated  $H_2SO_4$  is added to bring the  $H_2SO_4$  content of the final solution to 35 %. It is then diluted further with 85 %- $H_2SO_4$  to 100 ml. To 5 ml of this solution 0.15 ml of a solution of (I) (0.1 g (I) in 10 ml concentrated  $H_2SO_4$ ) is added and after 20 minutes the intensity of fluorescence (excited by UV light) is measured with a vertical Pulfrich spectrophotometer. The mean error of determination is about 7 %. [Abstracter's note: Complete translation.]

Card 2/2

S/137/61/000/012/043/149  
A006/A101

AUTHORS: Kudryavtsev, A.A., Sadov, N.V., Ustyugov, G.P., Ryabova, R.I.

TITLE: On the separation of sulfur, selenium and tellurium

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 12, 1961, 23, abstract 120166 ("Tr. Mosk. khim.-tekhnol. in-ta im. D.I. Mendeleyeva", 1961, no. 35, 111 - 115)

TEXT: Information is given on methods of separating S, Se and Te. To check the possibility of separating S and Se by rectification, the concentrate containing 70.5% Se (the rest S, low-volatile and non-volatile substances) was charged in a water-filled container and heated to 90°C for 1 - 2 hours. For further refining, the Se was placed in a crucible and heated during 1 hour at 200°C. Impurities emerging on the surface of the melt, were removed. Then Se was refired in a rectification column, and a product containing 99.99% Se was obtained. When separating Se and Te in the rectification column a product was obtained containing 99. 997 - 99.999% Se. There are also chemical methods of separating Se and Te; a) a method based on the different volatility of  $SeO_2$  and  $TeO_2$ .

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Card 1/2

9/137/61/000/012/043/149  
A006/A101

On the separation of sulfur ....

b) oxidation of the Se - Te mixture, and their subsequent separation and reduction, by utilizing the different acidity of the medium. The following methods of separating S, Se and Te should be checked: rectification, electrolytical de-position, oxidation of the S, Se and Te mixture with subsequent separation and reduction of oxides.

L. Vorob'yeva

[Abstracter's note: Complete translation]

Card 2/2

8/137/61/000/012/045/149  
A006/A101

AUTHORS: Kudryavtsev, A.A., Lekaye, V.M., Yelkin, L.N., Ustyugov, G.P.

TITLE: Equipment and technology of developing the continuous thermal process of selenium and tellurium production

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 12, 1961, 2<sup>4</sup>, abstract 120168 ("Tr. Mosk. khim.-tekhnol. in-ta im. D.I. Mendeleyeva", 1961, no. 35, 119 - 124)

TEXT: On account of the complexity and expensiveness of chemical methods for extracting Se and Te from slurries of copper-melting, sulfuric acid and other plants, a continuous thermal method is suggested for the reprocessing of slurries containing Se and Te. The initial material is charged into an externally heated retort, and volatile components, such as S, Se and Te, and some admixtures, are distilled. The vapors obtained are cleaned from dust and then supplied to the condenser. The liquid mixture of the aforementioned substances is separated in two (or more) rectification columns. In the first column S is distilled, and Se in the second one; the cubin residue consists of Te. To bring about the given scheme, equipment materials should be selected, since the materials to be re-

Card 1/2

S/137/61/000/012/045/149  
A006/A101

Equipment and technology ...

processed are very aggressive. Special steels and non-metallic materials should be tested. The thermal method for obtaining Se and Te has the following main advantages over chemical methods: reduced number of reprocessing stages; consumption of chemical reagents is not required; reduced cost price and investment costs; improved work conditions; the possibility of mechanizing and automating the process.

V. Gulyanitskiy

[Abstracter's note: Complete translation]

Card 2/2

KUDRYAVTSEV, A.A.; USTYUGOV, G.P.

Determination of the saturated vapor pressure of selenium and  
tellurium. Trudy MKHTI no.38:42-46 '62. (MIRA 16:7)

(Selenium)      (Tellurium)      (Vapor pressure)

GORDIYEVSKIY, A.V.; USTYUGOV, G.P.

Photometric determination of boron in magnesium alloys. Izv.vys.  
ucheb.zav.;khim.i khim.tekh. 4 no.3:366-369 '61.  
(MIRA 14:10)

1. Moskovskiy khimiko-tehnologicheskiy institut imeni  
Mendeleyeva, kafedra tekhnologii radioaktivnykh i redkikh  
elementov.

(Boron--Analysis)  
(Magnesium alloys)

52200

29527  
S/078/61/006/011/001/013  
B101/B147

AUTHORS: Kudryavtsev, A. A., Ustyugov, J. P.

TITLE: Determination of pressure of saturated telluric vapor

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 6, no. 11, 1961, 2421-2424

TEXT: The authors determined the pressure of saturated telluric vapor up to 760 mm Hg as a function of temperature; the boiling points at various pressures, and experimentally checked the normal boiling temperature of Te. They used the apparatus illustrated in Fig. 1. 30 - 40 g of tellurium (1) was filled into quartz container 5. The evacuated apparatus was filled with argon. The pressure was read from manometer 15 (accuracy 0.2 mm Hg) with the aid of a magnifying glass. Furnace 4, controlled by an ЭПД (EPD) voltmeter, was maintained constant at the expected boiling temperature. Furnace 2 was quickly heated to 20 - 30°C below boiling temperature, whereupon cock 16 was closed and 1 was made to boil. Quick motion of the Hg drop within capillary tube 13 indicated the boiling point. The position of the drop between A (start of experiment) and B was pencil-indicated on paper-tape 19. Temperature was measured by thermocouple 9 movable

X

Card 1/4

29/27  
S/078/61/006/011/001/013  
B101/B147

Determination of pressure of...

within quartz tube 10 by aid of screw 8. The remaining details concerning Fig. 1 are: (3) asbestos intermediate layer; (6) condenser; (7) nut; (11) stainless steel cylinder; (12) Hg container; (14) Hg collector; (17), (18) buffer capacities; (20) thermocouples; (a) water; (b) to vacuum pump; (c) argon. Control tests carried out with selenium showed good agreement with the data of L. S. Brooks (see below) and V. V. Illarionov, L. M. Lapina (Dokl. AN SSSR, 114, 1021 (1957)). Tellurium was produced according to M. P. Smirnov, G. A. Bibenina (Tsvetnyye metally, no. 12, 17 (1957)) and purified according to A. A. Solovushkov, L. A. Soshnikova, Z. M. Matveyeva (Chistyye metally i poluprovodniki (Pure metals and semiconductors) Tr. Pervoy mezhvuzovskoy konferentsii po chistym metallam, metallicheskim soyedineniyam i poluprovodnikovym materialam, Metallurgizdat, L., 1959, p. 239). The following was found:

Card 2/4

Determination of pressure of...

29527  
S/078/61/006/011/001/013  
B101/B147

p, mm Hg.	t, °C	p, mm Hg	t, °C	p, mm Hg	t, °C
13	646.0	68	761.0	250	872.7
20	672.0	90	781.8	330	901.0
30	700.5	115	803.0	450	932.3
38	717.5	150	825.5	600	964.0
50	737.0	190	846.5	760	990.2

The following equation was derived from these data:

$\log p_{\text{mm Hg}} = -5960.5/T + 7.5992$ . According to this equation, the normal boiling temperature of Te amounts to  $990.1 \pm 1.0^{\circ}\text{C}$ , and the evaporation heat to  $\Delta H_{\text{ev}} = 27.26 \pm 0.27 \text{ kcal/mole}$ . There are 2 figures, 3 tables, and 19 references: 6 Soviet and 13 non-Soviet. The three most recent references to English-language publications read as follows: L. S. Brooks, J. Amer. Chem. Soc., 74, 227 (1952); A. L. Giorgi. Diss. Abstr., 17, 2166 (1957); R. Machol, F. Westrum. J. Amer. Chem. Soc., 85, 2950 (1958). X

Card 3/4

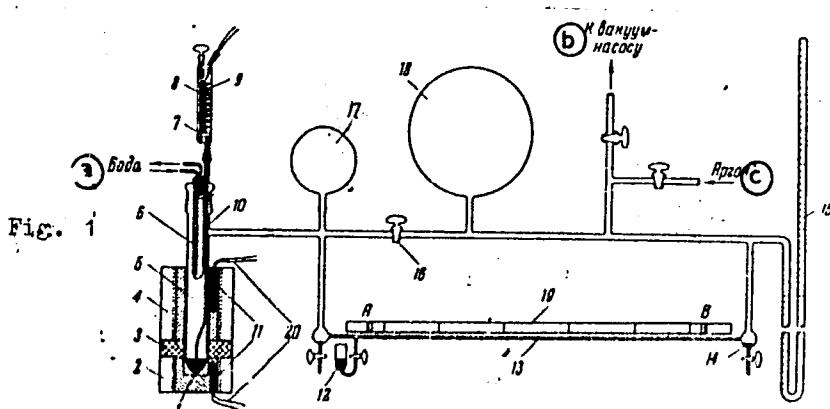
29527

S/078/61/006/011/001/013  
B101/B147

Determination of pressure of...

SUBMITTED: October 29, 1960

Fig. 1. Apparatus for determining the pressure of saturated telluric vapor.



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L 47747-65 EWT(m)/EWG(m)/EWP(t)/EWP(h) IJP(c) RDW/JD

2/  
B

ACCESSION NR: AP5010921

UR/0286/65/000/007/0104/0104

AUTHOR: Kudryavtsev, A. A.; Ryabova, R. I.; Ustyugov, G. P.; Bartosevich, N. K.  
Morozov, I. F.; Zhukov, P. I.; Gerasimov, V. S.

TITLE: Method of refining tellurium. Class 40, No. 169793

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 7, 1965, 104

TOPIC TAGS: tellurium, tellurium refining, high purity tellurium

ABSTRACT: This Author Certificate introduces a method of refining tellurium up to 99.9999% purity. Commercial grade tellurium is purified by distillation, first in hydrogen at 700C and then in a vacuum of 1 mm Hg at a temperature gradually changing from 800C in the still to 500C in the condenser. [AZ]

ASSOCIATION: none

SUBMITTED: 19Oct62

ENCL: 00

SUB CODE: MM

NO REF Sov: 000

OTHER: 000

ATD PRESS: 4005

P  
Card 1/1

USTYUGOV, M.; GARBARCHUK, M.

News from schools. Prof.-tekhn.obr. 19 no.10:32 0 '62.  
(MIRA 15:11)  
(Vocational education)

USTYUGOV, N.V.

KAFENGAUZ, Berngard Borisovich; USTYUGOV, N.V., doktor istor. nauk, otvetstvennyy red.; TROITSKIY, S.M., red. izd-va; MARKOVICH, S.G., tekhn. red.

[Russian home market during the first half of the 18th century;  
based on Russian customs records] Ocherki vnutrennego rynka Rossii  
pervoi poloviny XVIII veka; po materialam vnutrennikh tamozhen.  
Moskva, Izd-vo Akad. nauk SSSR, 1958. 353 p. (MIRA 11:?)  
(Russia—Commerce)

YATUNSKIY, V.K., doktor istor. nauk, otv. red.; SKAZKIN, S.D., akad.,  
red.; KRUUS, Kh.Kh., red.; NIFONTOV, A.S., doktor istor. nauk,  
red.; USFYUGOV, N.V., doktor istor. nauk, red.; KAKHE, Yu.Yu.,  
kand. istor. nauk, red.; MAAMYAGI, V.A., kand. istor. nauk, red.;  
ANPIMOV, A.M., kand. istor. nauk, red.; KUZOVLEV, A.A., red. izd-  
va; RYLINA, Yu.V., tekhn.red.

[Yearbook of the agrarian history of Eastern Europe, 1959] Èsche-  
godnik po agrarnoi istorii Vostochnoi Evropy 1959 g. Moskva,  
1961. 457 p. (MIRA 14:5)

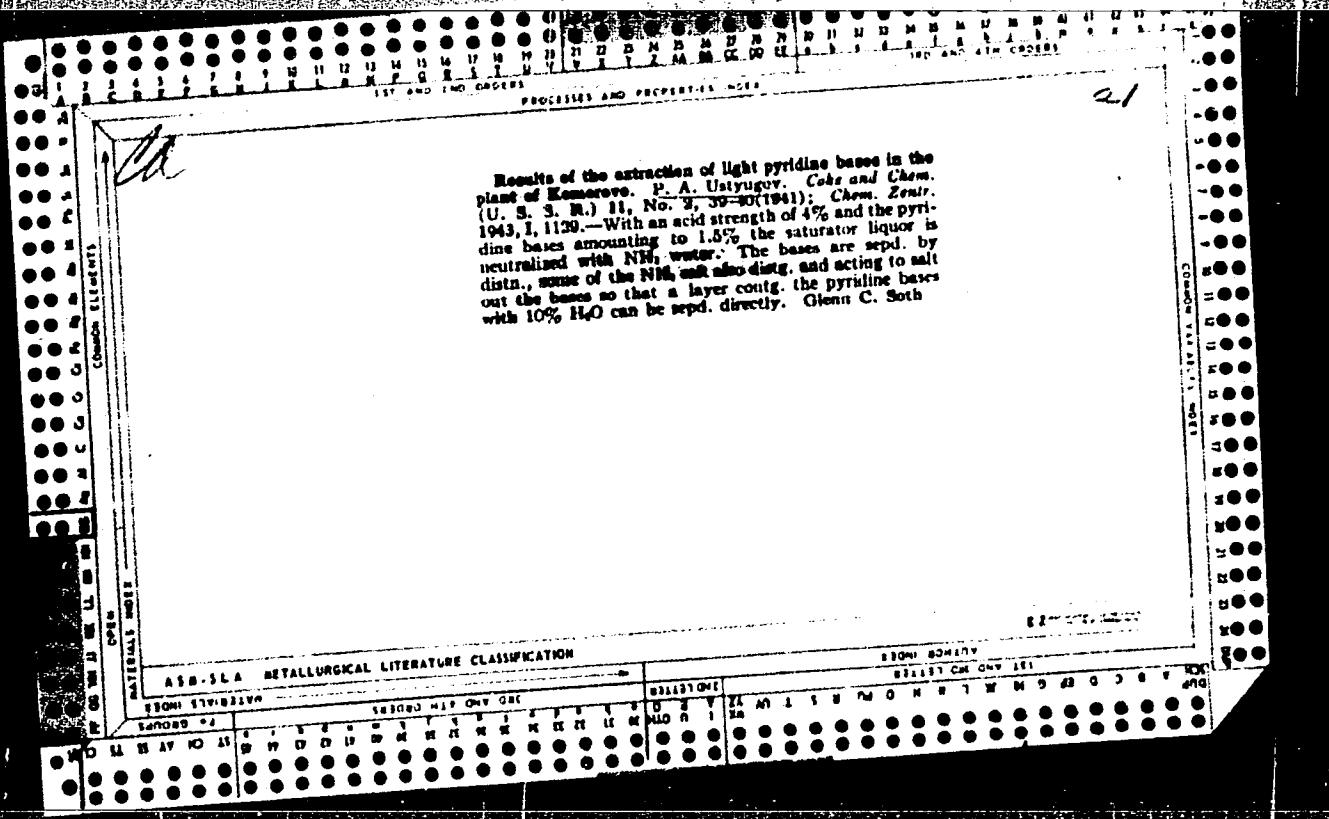
1. Akademiya nauk SSSR. Institut istorii. 2. Chlen-korrespondent  
AN SSSR ( for Kraus)  
(Europe, Eastern-- Agriculture)

MERZON, Aleksandr TSezarevich, kand.istor.nauk [deceased]; TIKHONOV,  
Yuriy Aleksandrovich; USTYUGOV, N.V., doktor istor.nauk, otv.  
red.; PODGORNIENSKAYA, TS.M., red.izd-va; NOVICHKOVA, N.D.,  
tekhn.red.

[The market of the Great Ustyug; during the development of an  
all-Russian market in the 17th century] Rynok Ustiuga Velikogo;  
v period skladyvania vserossiiskogo rynka (XVII vek). Moskva,  
Izd-vo Akad.nauk SSSR, 1960. 714 p. (MIRA 13:8)  
(Ustyug--Commerce)

KAMENTSEVA, Ye.I.; USTYUGOV, N.V.; LIPKINA, T.G., red.

[Russian metrology] Russkaia metrologiia. Moskva. Vysshiaia  
shkola, 1965. 254 p. (MIRA 18:4)



USTYUGOV, PA.

PHASE I BOOK EXPLOITATION 1042

Ural'skiy zavod tyazhelogo mashinostroyeniya, Sverdlovsk

Kovka i termicheskaya obrabotka (Forging and Heat Treatment) Moscow,  
Mashgiz, 1958. 132 p. (Series: Its Sbornik statey, vyp 5)  
6,000 copies printed.

Ed.: Kvater, I.S., Engineer; Tech. Ed.: Dugina, N.A.; Ed.  
(Ural-Siberian Division, Mashgiz): Sustavov' M.I., Engineer.

PURPOSE: This book is intended for engineers and technicians working  
in the field of forging and heat-treating of metals.

COVERAGE: The book presents material which reflects the achievements  
of Uralmashzavod (Ural Heavy Machine-building Plant imeni S.  
Ordzhonikidze) in the field of forging and heat-treating of metals.  
Various improvements in production methods, mechanization and  
automation of forging and heat-treating processes, application of  
various methods of inspection of forgings and elimination of  
rejects are described. Specific information on improvements in

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Forging and Heat Treatment 1042

forging and heat-treating of large parts such as turbine discs and rotors, cold-rolling-mill rolls, and crankshafts are presented. Descriptions are given of the results of new studies undertaken with a view to elimination of rejects and improvement of the quality of parts, determination of residual stresses at various cooling speeds, data on the efficiency of ultrasonic inspection and the effect of degassing of molten steel on the quality of forgings. The book was prepared by the members of the plant organization of NTOmashprom in connection with the 25th anniversary of the Ural Heavy Machine-building Plant.

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- Zabrudovskiy, V.M. Determination of Residual Stresses in Large Parts 115
- Kozhevnikov, M.A. Investigation of Parts Rejected on Ultrasonic Inspection 123
- Kuruklis, G.L., and Vereshchagina, M.G. Sulphidization of Machine Parts 130

AVAILABLE: Library of Congress

GO/ksv  
1-7-59

Card 4/4

S/123/59/000/008/015/043  
A004/A002

Translation from: Referativnyy zhurnal, Mashinostroyeniye, 1959, No. 8, p. 68,  
# 29048

AUTHORS: Lebedev, A. V., Ustyugov, P. A.

TITLE: Welding the Internal Defects of Large-Size forgings

PERIODICAL: Sb. stately. Ural'skiy z-d tyazh. mashinostr. imeni S. Ordzhonikidze,  
1958, No. 5, pp. 21-33

TEXT: Bibliographic entry

✓

Card 1/1

~~LEBEDEV, A.V.; USTYUGOV, P.A.~~

Sealing-in internal defects in making large forgings. Sbor.st.  
UZTM no.5:21-33 '58. (MIRA 11:12)  
(Forging) (Metals--Defects)

*USTYUGOV P. A.*

APPENDIX: Malyshov, L.A., Bogacheva, G.N., Slobotskii, V.D.  
Ustyugov, P.A.

SN/186-7-1-14/28  
and

STRUCTURE OF THE TEMPERATURE OF PLASTIC DEFORMATION ON THE  
STRUCTURE AND IMPACT STRENGTH OF AUSTENITIC STEEL

(PLASTIC TEMPERATURE PLASTICITY, DEFORMATION STRUCTURE, IMPACT RESISTANCE, STRUCTURE, austenitic steel)

PERIODICAL: Plast. Metall. i Metallovedeniye, 1959, Vol. 7, No. 1,

pp. 102-106 (MKS)

ABSTRACT: In this paper the structure of austenitic steel, deformed by rolling at various temperatures, was investigated, and it was endeavoured to establish a relationship between the change in structure and mechanical properties in the ductile and brittle states (the last after annealing). Experiments were carried out with the austenitic steel, 11 X 11 X 60 mm, deformed in laboratory hydraulic press at various temperatures between room temperature and 1200°C (at 200°C intervals). Reduction in area in all cases was case 1/4. Rolling speed was 15 mm/sec in all cases.

Prior to deformation, all specimens were heated to 1150°C and held there for 20 minutes. Deformation at temperatures below 800°C was carried out on specimens which had been quenched from 1150°C. For deformation at higher temperatures specimens which had been heated to 1150°C, were cooled to the required temperature. In order to avoid very stable annealing the specimens were cooled in water immediately after deformation. In order to bring out all the lines the deformed specimens prior to heating into autoclaves were aged at 700°C for two hours. A notch, 2mm deep, was made in the deformed specimens for impact testing. As the toughness of austenitic steel, quenched in water after deformation, is very great, impact tests were carried out at liquid nitrogen temperatures. Under certain conditions the investigated austenitic steel suffers very intense aging which greatly lowers its impact strength. The influence of the preliminary plastic deformation of austenite on the impact resistance of the steel under conditions of prolonged aging was studied by testing the impact resistance of deformed specimens which had been aged for a long time. The impact

test in this case was carried out at room temperature. FIG. 1 shows the influence of the temperature of deformation on the structure of austenitic steel (deformation at 300°C) (a) at 400°C (b) at 500°C (c) at 600°C. In Figs. 2 the structure of austenite at deformation temperatures of 700°C, 800°C, 900°C, 1000°C, 1100°C, 1200°C, 1300°C, 1400°C, 1500°C, 1600°C, 1700°C, and 1800°C are shown. The results of hardening and impact strength tests of austenitic steel specimens deformed by 30% by rolling at temperatures of 30, 400, 500, 600, 1000, and 1200°C, and then cooled are shown. The deformed specimens were tested at liquid nitrogen temperatures (FIG. 7), and as room temperature (FIG. 8). The results of impact strength and hardness determinations of deformed and un-deformed

ASSOCIATION: Institute of Metal Physics, Academy of Sciences of the USSR (Institute of Metal Physics, Akad. USSR); Ural'skiy nauchno-issled. tsentr po metallostrukturam i metalloobrabotke (Ural'skiy nauchno-issled. tsentr po metallostrukturam i metalloobrabotke)

RECEIVED: November 19, 1957

USTYUGOV, P.A.

Maintenance of apartment houses in Vidnoye, settlement of workers  
of the Moscow by-product coking plant. Gor. khoz. Mosk. 33 no.5:  
32 My '59. (MIRA 12:7)  
(Vidnoye--Apartment houses--Maintenance and repair)

U.S. Tyucov, P. A.

Influence of Deformation of Martensite on the Cold Shortness of Austenitic Steels and their Hardening in Plastic Deformation. O-O.71 W. 0-0.010 S. 0-0.067 P. 60 mm long pieces were cut 12 x 12 mm forged bars. The pieces were heated to 1150°C and cooled in water. Microscopic tests showed no martensite transformation on cooling to -196°C. Standard notched test-pieces (2 mm deep notch, 1 mm radius of curvature) were used for impact tests from room to liquid-nitrogen temperature. Alpha-phase measuring magnetic susceptibility ( $\chi_{\text{c}}$ ) of austenite on 3 x 3 x 9 mm pieces cut from the fracture region of impact tests. Mohr's salt bars used as the standard. In a second series of experiments the austenitic steels after quenching from 1150°C were rolled at 200°C. On some of the specimens deformation was applied at 200°C. The influence of deformation on the temperature, the effect of the various steels as functions of test temperature, the effect of the various alloying elements being brought out. Magnetic susceptibility as function of test temperature being mainly shown in Figs. 4 and 5. Figs. 6 and 7 show deformation of martensite structures and Fig. 8 the fractures obtained at various temperatures. The dependence of

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25

8111/8333

**AUTHORS:** Belenkova, M.M., Kodlubik, I.I., Malyshev, E.A.  
**PUBLISHER:** Naukova Dumka, Kiev, 1983.

**TITLE:** Influence of Deformation of Martensite on the Gold-Silver and Gold-Tin-Silver Alloys. I.A.

## Microstructure of Austenitic Steels and Their Hardening in Plastic Deformation<sup>1</sup>

No. 1, pp. 122-130  
MARCH 1960

**FACT:** Investigation of a series of suicidal people has shown that some have a tendency to drift from one place to another.

out that martensite formation during cold-shortness testing is the probable cause and that liability of austenitic steels

The deformation temperature relative to the martenite point

The assertions are equal. Their present work dealt with the following steels: *Tanisus* in Table I, "WODU", *SOGIJIN*, *KOBEN*, *KOBLICHEN*, *KOGIBEN*, *SODIUM*, *SOGUBEN*. The composition ranges ( $\% \text{C}$ ):

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001858220015-9"

81908

S/126/60/010/01/01/01/019  
811/335

Influence of Deformation of Martensite on the Cold Shortness of Martensitic Steels and Their Hardening in Plastic Deformation  
tensile strength, yield point, toughness, and magnetic susceptibility on deformation temperature is shown in Figs. 9, 10, 11 and 12. 400B and 500D steels showed pronounced cold shortness, which could be considerably reduced or completely eliminated by additional alloying with chromium or nickel. The reason for the cold shortness is deformation-martensite formation during low-temperature impact testing. The good effect of allowing the martensitic steels with chromium and nickel is explained by the improved austenite stability with respect to plastic-deformation induced austenite transformation. Formation of such martensites is the reason for the great effectiveness of manganese austenitic steels in cold compared with 200-300°C plastic deformation. In stable austenitic steels, additionally alloyed with chromium and nickel, hardening in cold and even hot work-hardening is practically the same. There are 12 figures, 3 tables and 7 Soviet references.

Card 5/8

81908  
S/126/60/010/01/01/01/019  
811/335

Influence of Deformation of Martensite on the Cold Shortness of Austenitic Steels and Their Hardening in Plastic Deformation  
ASSOCIATION:  
Institut Stalba vstav AN SSSR (Institute of Physics of Metals of the Ac. Sc. USSR)  
Ural'skiy zavod tsentral'nogo mashinostroyeniya im. S. Ordzhonikidze (Ural Heavy Engineering Works)  
Avanil S. Ordzhonikidze

SUBMITTED:  
February 23, 1960

Card 4/8

ACCESSION NR: AP4010070

S/0129/64/000/001/0024/0027

AUTHORS: Gorbach, V.G.; Malyshov, K.A.; Gees, A.V.; Ustyugov, P.A.

TITLE: Effect of high temperature nonrecrystallizing work hardening  
on the mechanical properties of precipitation hardened  
steels.

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 1,  
1964, 24-27.

TOPIC TAGS: precipitation hardened steel, austenitic steel, work  
hardening, aging, high temperature work hardening, vanadium contain-  
ing steel, brittleness, recrystallization, strength, impact strength

ABSTRACT: A study of austenitic steels (containing Cr-Ni-Mn, Cr-Ni-  
Mn-V and Cr-Mn-V) showed that high temperature work hardening  
affected their properties favorably after aging, increasing strength  
and impact strength. The high temperature work hardening decreased  
the transcrystalline brittleness developed by precipitation harden-  
ing. The partial growth of recrystallization by the high tempera-  
ture work hardening does not eliminate the possibility of getting

Card 1/2

ACCESSION NR: AP4010070

higher mechanical properties (in comparison to properties of steels not subject to high temperature work hardening) by subsequent precipitation hardening. Austenitic steel containing 1.5% vanadium, when subjected to a combination of high temperature work hardening and aging has high mechanical properties even by partial recrystallization during the high temperature deformation process. Orig. art. has: 2 tables and 4 figures.

ASSOCIATION: None

SUBMITTED: 00 DATE ACQ: 07Feb64 ENCL: 00  
SUB CODE: ML NO REF Sov: 002 OTHER: 000

Card 2/2

ACC NR: AR6027503

SOURCE CODE: UR/0137/66/000/004/I019/I019

AUTHOR: Belenkova, M. M.; Mikheyev, M. N.; Malyshev, K. A.; Sadovskiy, V. D.;  
Ustyugov, P. A.

TITLE: Phase transformations during the deformation and tempering of austenitic steel

SOURCE: Ref. zh. Metallurgiya, Abs. 4II27

REF SOURCE: [Tr.] In-ta fiz. metallov. AN SSSR, vyp. 24, 1965, 54-58

TOPIC TAGS: metal deformation, austenite steel, martensitic transformation, grain size, magnetic susceptibility

TRANSLATION: A study was made of the magnetic, electrical and mechanical properties of 60Kh318N8V austenitic band steel subjected to deformations of 10, 25, 31, and 43% after quenching from 1050°C. For the same deformation conditions, a fuller decomposition of austenite occurred in large-grained samples as a result of the variation of the position of the martensitic point for a change of grain size (the point of the initial martensitic transformation of large-grained samples was located higher than fine-grained). Under the effect of deformation in the steel, a much greater amount of  $\alpha$ -phase formed than during tempering. A definite correlation was found between the nature of the magnetic and electrical property changes on the one hand and the mechanical properties on the other, as a function of tempering temperature. Thus, a drop in  $\sigma_b$

UDC: 669.15'26'74'24.781.017.3:621.785.78

Card 1/2

ACC NR: AR6027503

and  $\sigma_s$  of samples deformed at 20°C was found beginning at 400-450°C; at these same temperatures the lowering of electrical resistivity was initiated. Magnetic susceptibility increased after 500°C, while  $\psi$  and  $a_k$  decreased. It was concluded that the changes in mechanical properties were caused by processes associated with the formation of  $\alpha$ -phase during cold deformation. During tempering of the deformed samples, the  $\alpha$ -phase of the original deformation is dissolved and some quantities of the ferromagnetic phase appear in separate portions owing to carbide formation. I. Tulupova.

SUB CODE: 11,13

Card 2/2

Lev Tyugayev, T. S.

TARAPATOV, Lev Anatol'yevich, inzhener; USTYUGOV, P.G., redaktor;  
TYURYAYEV, M.A., tekhnicheskiy redaktor.

[Experience of the Kirghiz Petroleum Trust with directionally  
drilled wells] Opyt naklonno-napravленного бурения скважин в  
"Kirgiznefti." Frunze, Kirgizskoe gos.izd-vo, 1957. 31 p.  
(MIRA 10:11)

1. Kontora bureniya No.1 "Kirgiznefti" (for Tarapatov).  
(Oil well drilling)

GODUMENKO, Lyubov' Nikolayevna, doyarka; USTYUGOV, P.G., red.; BEYSHENOV, A., tekhn. red.

[Let us use loose housing of cows] Korov soderzhim bez pri-viazi. Frunze, Kirgizskoe gos. izd-vo, 1960. (MIRA 15:3)

1. Sovkhoz "Dzhangi-Pakhta" (for Godumenko).  
(Dairy barns)

ISAKOV, Dmitriy Ivanovich; USTYUGOV, P.G., red.; BEYSHENOV, A., tekhn.  
red.

[I will fatten a thousand swine a year] Otkormliu tysiach  
svinei v god. Frunze, Kirgizskoe gos. izd-vo, 1960. 30 p.  
(MIRA 15:3)

(Kirghizistan—Swine—Feeding and feeds)

SKRIPAYEVA, Mariya Vasil'yevna; USTYUGOV, P., red.; CHOTLYEV, S.,  
tekhn. red.

[For 150 eggs from each layer] Za 150 iaitc ot kazhdoi ku-  
ritsy-nesushki. Frunze, Kirgizskoe gos. izd-vo, 1960. 30 p.  
(MIRA 15:3)

(Kalininskiy District--Poultry)

PETRIYCHUK, Dmitriy Ignat'yevich; SLASHCHEVA, Lidiya Alekseyevna;  
USTYUGOV, P., red.; CHOTIYEV, S., tekhn. red.

[Manganese and its importance in agriculture] Marganets i ego  
znachenie v sel'skom khoziaistve. Frunze, Kirgizskoe gos. izd-  
vo, 1960. 45 p. (MIRA 15:3)  
(Manganese compounds) (Trace elements)  
(Agriculture)

"APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001858220015-9

KARATYSH, A.G.; USTYUGOV, P.G., red.; BEYSHENOV, A., tekhn. red.

[Ways for increasing the performance of sugar beet combines]  
Puti uluchsheniia raboty sverklokombainov. Frunze, Kirgizakoe  
gos. izd-vo, 1960. 56 p.  
(Sugar beets) (Combines (Agricultural machinery))

APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001858220015-9"

KOSTYACHENKO, I.V.; MYTSIK, I.P.; USTYUGOV, P.G., red.; GOLOD, O.V.,  
red.; BEYSHENOV, A., tekhn.red.

[Let's double the milk yields] Udvoim nadoi moloka. Fronz,  
Kirgizskoe gos.isd-vo, 1960. 78 p. (MIRA 14:4)

1. Predsedatel' kolkhoza "Kirgiziya" Alamedinskogo rayona (for  
Kostyachenko). 2. Glavnnyy zootehnik kolkhoza imeni Lenina  
Alamedinskogo rayona (for Mytsik).  
(Alamedin District--Dairying)

USTYUGOV, P.G.; DZHAYNAKOV, A.D.; KOLICHENKO, V.V., red.; CHOTIYEV, S.,  
tekhn. red.

[Youth on livestock farms] Molodezh' na fermakh. Frunze,  
Kirgizskoe gos. izd-vo, 1961. 52 p. (MIRA 15:3)  
(Kirghizistan--Stock and stockbreeding)

KIL'CHEVSKIY, Afanasiy Leont'yevich, doktor sel'skokhoz.nauk, prof.;  
KUZNETSOV, Nikolay Ivanovich, kand.sel'skokhoz.nauk;  
USTYUGOV, P.G., red.; BEYSHENOV, A., tekhn.red.

[Corn cultivation in Kirghizistan] Vozdelyvanie kukuruzy  
v Kirgizi. Frunze, Kirgizskoe gos.izd-vo, 1961. 77 p.  
(MIRA 15:5)

(Kirghizistan—Corn (Maize))

OTTSELAYNEN, V.P., zootehnik; POPOV, L.P., zootehnik; USTYUGOV, P.G.,  
red.; GOLOD, O.V., red.; BEYSHENOV, A., tekhn. red.

[More meat for the country] Bol'she biaza strane. Frunze, Kir-  
gizskoe gos.izd-vo, 1961. 79 p.  
(MIRA 15:3)

1. Kolkhoz "Niva" Kalininskogo rayona, Kirgiz (for Ottselaynen).  
2. Kolkhoz imeni Lenina Alamedinskogo rayona, Chuyskoy doliny,  
Kirgiz (for Popov).  
(Chuya Valley--Meat)

ALYBAYEV, Beyshen; DOROKHOV, Mikhail Gerasimovich; USTYUGOV, P.G.,  
red.; BEYSHENOV, A., tekhn. red.

[Storage of agricultural machinery] Khranenie sel'skokho-  
ziaistvennykh mashin. Frunze, Kirgizgosizdat, 1962. 29 p.  
(MIRA 17:2)

"APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001858220015-9

USTYUGOV, Yu.M. (Kirov)

Rock salt boulder. Priroda 53 no.5:19 '64. (MIRA 17:5)

APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001858220015-9"

USTYUKHIN, I. I.

Spinning Machinery

Economic advantages of using ring spinners in spinning cloth. Tekst. prom. no. 5 (1952)

9. Monthly List of Russian Accessions, Library of Congress, August 1952 ~~1953~~, Uncl.

TURCHANINOV, A.A., inzh.; Prinimali uchastiye: TORCHIN, Ya.G., starshiy nauchnyy sotrudnik; USTYUKHIN, I.I., starshiy nauchnyy sotrudnik; ALEKSEYEVA, T.A., mladshiy nauchnyy sotrudnik; KRASNOVYEVTSYVA, N.V., mladshiy nauchnyy sotrudnik; GORDON, V.N., starshiy tekhnik-laborant; SAVINA, L.A., starshiy tekhnik-laborant; SOROKINA, A.I., starshiy tekhnik-laborant.

Determining the labor input for the manufacture of the basic types of production in the woolen and worsted industry. Nauch.-issl. trudy TSNIIShersti no.18.185-248 '63.

(MIRA 18-1)

USTYUKHIN, I.I., inzh.

Economic efficiency of combining the processes of spinning,  
slubbing and twisting on a spinner-twister. Nauch.-issl.  
trudy TSNIIIShersti no.17:38-51 '62. (MIRA 17:12)

"APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001858220015-9

USTYUKHIN, I.I., inzh.; SHMEL'KOVA, A.I., inzh.

Labor productivity in the wool industry during the current seven-year plan. Nauch.-issl. trudy TSNIIShersti no.17:102-112 '62.  
(MIRA 17:12)

APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001858220015-9"

USTYUKHIN, I.I., starshiy nauchnyy sotrudnik

Development of progressive norms for raw material utilization  
in the woolen and worsted industry. Tekst. prom. 25 no.3:  
6-8 Mr '65. (MIRA 18:5)

1. TSentral'nyy nauchno-issledovatel'skiy institut sherstyanoy  
promyshlennosti.

"APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001858220015-9

TARIQOV, V.M.; USTYUSHIN, B.V.; ORLOV, S.P.

Resistance of man to the action of short angular accelerations  
of great magnitudes. Probl. kosm. biol. 4:70-74 '65.

(MIRA 18:9)

APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001858220015-9"

USTYUZHANIN, B.I. GOLOVKO, V.

Valuable cartographic publication. "Album of small river charts of  
the R.S.F.S.R." A.I. Okhotnikov and others. Reviewed by B.  
Ustiyuzhanin., V.Golovko. Rech.transp. 15 no.5:32 My '56.

(MLRA 9:8)

(Rivers--Charts, maps, etc.)  
(Okhotnikov, A.I.)

SHAYDO, N.M., inzh.; USTYUZHANIN, F.V., inzh.

Reply to the article by V.R. Shchukin "Create a safety zone around waste disposal dumps. Bezop. truda v prom. 8 no.11: 49-50 N '64. (MIRA 18:2)

1. Gosudarstvennyy komitet pri Sovete Ministrov UkrSSR po nadzoru za bezopasnym vedeniyem rabot v promyshlennosti i gornomu nadzoru.

ZASLAVENKO, P.Vn., inzh.; USTYUZHANIN, F.V., inzh.; SHAYDO, N.M., inzh.

Effectiveness of preventive measures against sudden outbursts  
of coal and gas. Bezop. truda v prom. 8 no.12:3-6 D 164.  
(MIRA 18:3)

1. Gosudarstvennyy komitet pri Sovete Ministrov UkrSSR po nadzoru  
za bezopasnym vedeniyem rabot v promyshlennosti i gornomu nadzoru.

AUTHORS: Tikhomirova-Sidorova, N. S.,  
Ustyuzhanin, G. Ye. SOV/79-28-12-9/41

TITLE: Amino Derivatives of 1,4-Anhydroxylite (Aminoproizvodnyye  
1,4-angidroksilita)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 12, pp 3210-3213  
(USSR)

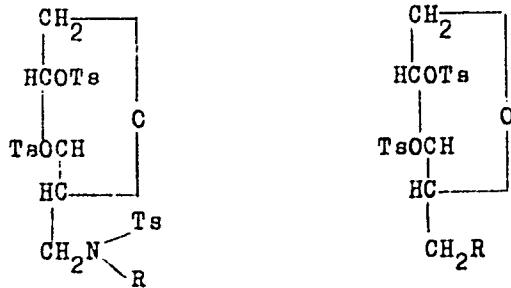
ABSTRACT: The authors completed their earlier papers (Ref 1) by synthesizing the amino derivatives of xylitane starting from its chlorohydrin (5-chloro-1,4-anhydroxylite). The amino derivatives of xylite and xylitane have hitherto remained unknown. There is only few data available on the amination of the other multivalent alcohols. Thus, the 1,6-diamino mannite was obtained from dichloro-dimethylene mannite on heating in the autoclave with ammonia in methyl alcohol (Ref 2). Reactions of xylitane chlorohydrin with various amines were investigated and the following compounds, hitherto unknown were synthesized: 5-amino-1,4-anhydroxylite (I), 5-ethyl-amino-1,4-anhydroxylite (II), 5-diethyl-amino-1,4-anhydroxylite (III), 5-phenyl-amino-1,4-anhydroxylite (IV), and 5-piperidino-1,4-anhydroxylite (V). The amines were characterized by their

Card 1/3

Amino Derivatives of 1,4-Anhydroxylite

SOV/79-28-12-9/41

tosyl derivatives which were used for the following syntheses. The action of p-toluenesulfonyl chloride is directed to the transformation of the alcohol groups into ester groups (VI to X) as well as to the amino groups for the primary amine (I) and the secondary amines (II, IV), with substituted sulfonamides (VI-VIII) being formed.



$R = H$  (VI),  $C_2H_5$  (VII),  $C_6H_5$  (VIII).  $R = N(C_2H_5)_2$  (IX),  $N(CH_3)_2$  (X).

Ts =  $O_2S-C_6H_4-CH_2-p$

Card 2/3

Amino Derivatives of 1,4-Anhydroxylite

SOV/79-28-12-9/41

The conditions of the synthesis, the properties and analyses of the amino derivatives of xylitane are mentioned in table 1, their tosyl esters are mentioned in table 2. There are 2 tables and 2 references, 1 of which is Soviet.

ASSOCIATION: Institut vysokomolekulyarnykh soyedineniy Akademii nauk SSSR (Institute of High-Molecular Compounds, Academy of Sciences, USSR)

SUBMITTED: January 20, 1958

Card 3/3

DANILOV, S.N.; TIKHOMIROVA-SIDOROVA, N.S.; USTYUZHANIN, G.Ye.;  
YEFIMOVA, G.Ye.; KOGAN, E.M.

New data on the structure of xylitol dianhydride. Zhur.ob.  
khim. 32 no~~4~~2:656-657 F '62. (MIRA 15:2)

1. Institut vysokomolekulyarnykh soyedineniy.  
(Xylitol)

USTYI ZHANIN, G. Ye.; KOLITSOV, A.I.; TIKHOMIROVA-SIDOROVA, N.S.; DANILOV,S.N.

Structure of 1,4-xylitane dianhydroxylite and acetals. Zhur. ob.  
khim. 34 no.12:3905-3907 D '64 (NIRA 18: ,

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.

L 3552-66 EWT(m)/EPF(c)/EWP(j)/T RM

ACCESSION NR: AP5024398

UR/0286/65/009/015/0080/0080

AUTHORS: Danilov, S. N.; Ustyuzhanin, G. Ye.; Sidorova, N. S.; Kogan, E. M.;  
Isakova, V. F.

TITLE: A method for obtaining epoxy resins. Class 39, No. 173405

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 15, 1965, 80

TOPIC TAGS: epoxy, resin, alcohol, phenol

ABSTRACT: This Author Certificate presents a method for obtaining epoxy resins by condensing epichlorhydrin of a polyatomic alcohol with biatomic phenols applicable to the production of epoxy resins (for instance, resorcin or dian). The reaction is carried out in the presence of a base at a rising temperature, and solidification proceeds in the usual manner. To broaden the base of raw material by replacing the edible products with inedible ones, epichlorhydrin of xilitane-1,4-2,3-dianhydro-5-chlor-5-desoxyxylite is used as epichlorhydrin of a polyatomic alcohol.

ASSOCIATION: Institut vysokomolekulyarnykh soyedineniy, AN SSSR (Institute of  
High Molecular Compounds, AN SSSR)

Card 1/2

"APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001858220015-9

L 3552-66  
ACCESSION NR: AP5024398

SUBMITTED: 10Nov63

ENCL: 00

SUB CODE: OC, *LC*

NO REF SOV: 000

OTHER: 000

*mlr*  
Card 2/2

APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001858220015-9"

ACC NR: AP7011821

SOURCE CODE: UR/0079/66/036/012/2219/2220

AUTHOR: Tikhomirova-Sidorova, N. S.; Ustyuzhanin, G. Ye.; Kogan, E. M.

ORG: none

TITLE: Alcoholsysis of uridine-2',3'-cyclophosphate with uridylic acid in the presence of pancreatic ribonuclease

SOURCE: Zhurnal obshchey khimii, v. 36, no. 12, 1966, 2219-2220

TOPIC TAGS: paper chromatography, organic phosphate, hydrolysis, ribonucleic acid

SUB CODE: 07

ABSTRACT: Alcoholsysis of uridine-2',3'-cyclophosphate (I) was carried out in an 0.015 M phosphate buffer solution (pH 7.0) at 0°. The reaction mixture with a total volume of 1 ml. contained 17 mg. pancreatic ribonuclease, I in a concentration of 0.12 M, and uridylic acid in concentrations of 0.24-0.72 M. The reaction products were separated by paper chromatography. The reaction, as indicated by disappearance of I, was completed in 20 hrs. The yield of oligonucleotides in all experiments was ~ 10%. In the presence of a 6-fold excess of uridylic acid, uridylyl-(3',5')-uridine-3'(2')-phosphate formed predominantly. Although hydrolysis took place to a greater extent than alcoholsysis, the reaction can be applied for

Card 1/2

UDC: 547.495.6+577.15

0932

0708